

CLAIMS

1. A stent comprising:
two serpentine bands;
at least one first connector; and
5 at least one second connector;
the first and second connectors connecting the two serpentine bands together;
the first connector and the second each having at least a first portion of a first curvature
and a second portion of a second curvature, the second portion being more flexible than
the first portion,
10 wherein the first and second connector are adjacent one another and the second
portion of the first connector nests within the first portion of the second connector and
the second portion of the second connector nests within the first portion of the first
connector.
2. The stent of claim 1 comprising a plurality of the first connectors and a plurality
15 of the second connectors, the first and second connectors arranged in pairs, wherein in
each pair, the second portion of one first connector nests within the first portion of one
second connector and the second portion of one second connector nests within the first
portion of one first connector.
3. The stent of claim 2 comprising a plurality of the serpentine bands, wherein
20 adjacent serpentine bands are connected by a plurality of the first connector and a
plurality of the second connector, wherein first and second connectors which are
circumferentially adjacent one another are arranged in pairs, wherein in each pair, the
second portion of one first connector nests within the first portion of one second
connector and the second portion of one second connector nests within the first portion
25 of one first connector.
4. The stent of claim 1 wherein each first connector includes at least one linear
section connecting the first and second portions of the first connector and each second
connector includes at least one linear section connecting the first and second portions of
the second connector.
- 30 5. The stent of claim 1 wherein the second connector has a shape which corresponds
substantially to that of the first connector, rotated by 180 degrees.
6. The stent of claim 1 crimped about a catheter.

7. The stent of claim 1 wherein the curvature of the first portion of the first connector is identical to the curvature of the first portion of the second connector and the curvature of the second portion of the first connector is identical to the curvature of the second portion of the second connector.
- 5 8. The stent of claim 1 wherein the curvature of the first portion of the first connector differs from the curvature of the first portion of the second connector and the curvature of the second portion of the first connector differs from the curvature of the second portion of the second connector.
9. The stent of claim 1 wherein the first portion of the first connector has a greater
10 width than the second portion of the first connector and the first portion of the second connector has a greater width than the second portion of the second connector.
10. The stent of claim 1 wherein the first portion of the first connector has a greater thickness than the second portion of the first connector and first portion of the second connector has a greater thickness than the second portion of the second connector.
- 15 11. The stent of claim 1 wherein the serpentine bands have peaks and troughs and the first and second connectors each extend from peaks of one of the serpentine bands to troughs of the adjacent serpentine band.
12. The stent of claim 1 wherein the first connector has a first end and a second end, the first end of the first connector circumferentially and longitudinally offset from the
20 second end of the first connector and the second connector has a first end and a second end, the first end of the second connector circumferentially and longitudinally offset from the second end of the second connector.
13. The stent of claim 1 wherein the first connector has a first end and a second end, the first end of the first connector and the second end of the first connector in axial
25 alignment and the second connector has a first end and a second end, the first end of the second connector and the second end of the second connector in axial alignment.
14. The stent of claim 1 wherein each serpentine band has a magnitude, the magnitude being the longitudinal distance from the proximal most portion of a serpentine band to the distal most portion of the same serpentine band, the connector having a first
30 end connected to a first serpentine band and a second end connected to a second serpentine band, the distance between the first and second ends of the connector exceeding the sum of the magnitudes of the two serpentine bands and the length of the

second connector exceeds the combined length of the magnitudes of the two serpentine bands.

15. A stent comprising:

a first serpentine band and a second serpentine band;

5 a first connector and a second connector circumferentially adjacent to the first connector, the first connector having a curved portion of a first shape, the second connector having a curved portion of a second shape, wherein the first and second connectors are cooperatively shaped so that the curved portion of the first connector nests within the curved portion of the second connector.

10 16. The stent of claim 15 comprising a plurality of the first connector and a plurality of the second connector wherein the first connectors and the second connectors are arranged in pairs, in each pair the curved portion of the first connector nests within the curved portion of the second connector.

15 17. The stent of claim 15 wherein the first and second connectors are each longer than the combined length of the first and second serpentine bands.

18. The stent of claim 15 wherein the first and second serpentine bands each comprise peaks and troughs and the first and second connectors each extend from a peak to a trough.

19. A stent comprising:

20 a first segment and a second segment,

an asymmetric first connector and an asymmetric second connector, the first and second connectors constructed and arranged to nest with one another.

25 20. The stent of claim 19 wherein the first connector has a first section of a first flexibility and a second section which is more flexible than the first section, and the second connector has a first section of a first flexibility and a second section of a greater flexibility than the second section of the second connector, wherein the first section of the first connector nests within the second section of the second connector.

21. The stent of claim 19 wherein the shape of the second connector corresponds to the shape of the first connector rotated by 180 degrees.

30 22. The stent of claim 19 wherein the first and second segments are each serpentine.

23. A stent comprising:

two serpentine bands;

at least three connectors including a first connector, a second connector, and a third connector;

the first connector, the second connector, and the third connector connecting the two serpentine bands together;

5 the first connector and the second connector each having at least a first portion of a first curvature and a second portion of a second curvature, the second portion being more flexible than the first portion,

wherein the third connector is disposed between the first connector and the second connector, the second portion of the first connector nests within a curved portion of the third connector, said curved portion of the third connector nesting within the first
10 portion of the second connector, and wherein the second portion of the second connector nests within a curved portion of the third connector, said curved portion of the third connector nesting within the first portion of the first connector.

24. The stent of claim 23 comprising a plurality of the first connectors, a plurality of
15 the second connectors, and a plurality of the third connectors, the first, second, and third connectors arranged in sets, wherein in each set, the second portion of the first connector nests within a curved portion of the third connector, said curved portion of the third connector nesting within the first portion of the second connector, and wherein the second portion of the second connector nests within a curved portion of the third
20 connector, said curved portion of the third connector nesting within the first portion of the first connector.

25. The stent of claim 24 comprising a plurality of the serpentine bands, wherein adjacent serpentine bands are connected by a plurality of the first connectors, a plurality of the second connectors, and a plurality of the third connectors, wherein second, and
25 third connectors which are circumferentially adjacent one another are arranged in sets, wherein in each set, the second portion of the first connector nests within a curved portion of the third connector, said curved portion of the third connector nesting within the first portion of the second connector, and wherein the second portion of the second connector nests within a curved portion of the third connector, said curved portion of the
30 third connector nesting within the first portion of the first connector.

26. The stent of claim 23 wherein each first connector includes at least one linear section connecting the first and second portions of the first connector and each second

connector includes at least one linear section connecting the first and second portions of the second connector.

27. The stent of claim 23 wherein the second connector has a shape which corresponds substantially to that of the first connector when rotated by 180 degrees.

5 28. The stent of claim 23 crimped about a catheter.

29. The stent of claim 23 wherein the curvature of the first portion of the first connector is identical to the curvature of the first portion of the second connector and the curvature of the second portion of the first connector is identical to the curvature of the second portion of the second connector.

10 30. The stent of claim 23 wherein the curvature of the first portion of the first connector differs from the curvature of the first portion of the second connector and the curvature of the second portion of the first connector differs from the curvature of the second portion of the second connector.

31. The stent of claim 23 wherein the first portion of the first connector has a greater
15 width than the second portion of the first connector and the first portion of the second connector has a greater width than the second portion of the second connector.

32. The stent of claim 23 wherein the first portion of the first connector has a greater thickness than the second portion of the first connector and first portion of the second connector has a greater thickness than the second portion of the second connector.

20 33. The stent of claim 23 wherein the serpentine bands have peaks and troughs and the first and second connectors each extend from peaks of one of the serpentine bands to troughs of the adjacent serpentine band.

34. The stent of claim 23 wherein the first connector has a first end and a second end, the first end of the first connector circumferentially and longitudinally offset from the
25 second end of the first connector and the second connector has a first end and a second end, the first end of the second connector circumferentially and longitudinally offset from the second end of the second connector.

35. The stent of claim 23 wherein the first connector has a first end and a second end, the first end of the first connector and the second end of the first connector in axial
30 alignment and the second connector has a first end and a second end, the first end of the second connector and the second end of the second connector in axial alignment.

36. The stent of claim 23 wherein each serpentine band has a magnitude; the

- magnitude being the longitudinal distance from the proximal most portion of a serpentine band to the distal most portion of the same serpentine band, the connector having a first end connected to a first serpentine band and a second end connected to a second serpentine band, the distance between the first and second ends of the connector
- 5 exceeding the sum of the magnitudes of the two serpentine bands and the length of the second connector exceeds the combined length of the magnitudes of the two serpentine bands.